(((((((transmi* and radio and mac and channel and (packet or frame) and preamble)))))))
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1 Voice transmission in an IEEE 802.11 WLAN based access network

Andreas Köpsel, Adam Wolisz
July 2001 WOWMOM '01: Proceedings of the 4th ACM international workshop on Wireless mobile multimedia
Publisher: ACM

Full text available: pdf(246.56 KB) Additional Information: full citation, abstract, references, cited by, index terms

Bibliometrics: Downloads (6 Weeks): 11, Downloads (12 Months): 153, Citation Count: 6

IEEE 802.11 contains a mechanism for transmission of data with realtime constraints known as *Point Coordination Function*. This supplementary medium access protocol resides on top of the basic medium access mechanism *Distributed Coordination* ...

Keywords: DCF, IEEE 802.11, PCF, WLAN, best-effort, real-time, scheduling, voice transmission

2 A scalable model for channel access protocols in multihop ad hoc networks

Marcelo M. Carvalho, J. J. Garcia-Luna-Aceves
September 2004 MobiCom '04: Proceedings of the 10th annual international conference on Mobile computing and networking
Publisher: ACM

Full text available: pdf(313.84 KB) Additional Information: full citation, abstract, references, cited by, index terms

Bibliometrics: Downloads (6 Weeks): 18, Downloads (12 Months): 191, Citation Count: 8

A new modeling framework is introduced for the analytical study of medium access control (MAC) protocols operating in multihop ad hoc networks. The model takes into account the effect of physical-layer parameters on the success of transmissions, the ...

Keywords: ad hoc networks, medium access control, modeling, performance evaluation

3 Floor acquisition multiple access (FAMA) in single-channel wireless networks

J. J. Garcia-Luna-Aceves, Chane L. Fullmer
October 1999 Mobile Networks and Applications, Volume 4 Issue 3
Publisher: Kluwer Academic Publishers

Full text available: pdf(333.92 KB) Additional Information: full citation, abstract, references, cited by, index terms

Bibliometrics: Downloads (6 Weeks): 3, Downloads (12 Months): 54, Citation Count: 10

The FAMA-NCS protocol is introduced for wireless LANs and ad-hoc networks that are based on a single channel and asynchronous transmissions (i.e., no time slotting). FAMA-NCS (for floor acquisition multiple access with non-persistent carrier sensing) ...

4 Transmission scheduling in ad hoc networks with directional antennas

Lichun Bao, J.J. Garcia-Luna-Aceves
September 2002 MobiCom '02: Proceedings of the 8th annual international conference on Mobile computing and networking
Publisher: ACM

Full text available: pdf(347.44 KB) Additional Information: full citation, abstract, references, cited by, index terms

Bibliometrics: Downloads (6 Weeks): 14, Downloads (12 Months): 104, Citation Count: 23

Directional antennas can adaptively select radio signals of interest in specific directions, while filtering out unwanted interference from other directions. Although a couple of medium access protocols based on random access schemes have been proposed ...

Keywords: ad hoc networks, channel access scheduling, directional antenna, multi-beam adaptive array (MBAA)

5 A bit-map-assisted energy-efficient MAC scheme for wireless sensor networks

Jing Li, Georgios Y. Lazarou
April 2004 IPSN '04: Proceedings of the third international symposium on Information processing in sensor networks
Publisher: ACM
Full text available: pdf(141.04 KB) Additional Information: full citation, abstract, references, cited by, index terms

Bibliometrics: Downloads (6 Weeks): 8, Downloads (12 Months): 128, Citation Count: 6

The low-energy characteristics of wireless sensor networks (WSNs) pose a great design challenge for MAC protocol design. Recent studies have proposed different cluster-based MAC protocols. In this paper, we propose an intra-cluster communication bit-map-assisted ...

Keywords: MAC protocols, energy-efficiency, wireless sensor networks

6 Effect of overhearing transmissions on energy efficiency in dense sensor networks

Prithwish Basu, Jason Redi
April 2004 IPSN '04: Proceedings of the third international symposium on Information processing in sensor networks
Publisher: ACM
Full text available: pdf(306.49 KB) Additional Information: full citation, abstract, references, index terms

Bibliometrics: Downloads (6 Weeks): 3, Downloads (12 Months): 56, Citation Count: 0

Energy efficiency is an important design criterion for the development of sensor networking protocols involving data dissemination and gathering. In-network processing of sensor data, aggregation, transmission power control in radios, and periodic cycling ...

Keywords: data dissemination/broadcast, data gathering, energy efficiency, overhearing, sensor networks

7 Why a multichannel protocol can boost IEEE 802.11 performance

Andrea Baiocchi, Alfredo Todini, Andrea Valletta
October 2004 MSWiM '04: Proceedings of the 7th ACM international symposium on Modeling, analysis and simulation of wireless and mobile systems
Publisher: ACM
Full text available: pdf(411.52 KB) Additional Information: full citation, abstract, references, cited by, index terms

Bibliometrics: Downloads (6 Weeks): 3, Downloads (12 Months): 75, Citation Count: 2

We analyse a CSMA MAC protocol for ad hoc wireless networks, that uses one control channel and a number of data channels. The data channel employed in each transmission is dynamically selected with an exchange of frames on the control channel. We present ...

Keywords: IEEE 802.11, MAC, collisions, hidden nodes, multichannel ad hoc networks

8 MR²RP: the multi-rate and multi-range routing protocol for IEEE 802.11 ad hoc wireless networks

Shiann-Tsong Sheu, Yihjia Tsai, Jenhui Chen
March 2003 Wireless Networks, Volume 9 Issue 2
Publisher: Kluwer Academic Publishers
Full text available: pdf(252.69 KB) Additional Information: full citation, abstract, references, cited by, index terms

Bibliometrics: Downloads (6 Weeks): 4, Downloads (12 Months): 80, Citation Count: 2

This paper discusses the issue of routing packets over an IEEE 802.11 *ad hoc* wireless network with multiple data rates (1/2/5.5/11 Mb/s). With the characteristics of modulation schemes, the data rate of wireless network is inversely proportional ...

Keywords: ad hoc, local area network (LAN), medium access control (MAC), routing, wireless

9 Poster abstract: wiseMAC, an ultra low power MAC protocol for the wiseNET wireless sensor network

A. El-Hoiydi, J.-D. Decotignie, C. Enz, E. Le Roux
November 2003 SenSys '03: Proceedings of the 1st international conference on Embedded networked sensor systems
Publisher: ACM
Full text available: pdf(158.26 KB) Additional Information: full citation, abstract, references, cited by, index terms

Bibliometrics: Downloads (6 Weeks): 8, Downloads (12 Months): 88, Citation Count: 5

WiseMAC is a medium access control protocol designed for the WiseNET™ wireless sensor network. It is based on CSMA and uses the preamble sampling technique to minimize the power consumed when listening to an idle medium. A unique feature of this ...

Keywords: CSMA, energy efficient, low power, medium access control, preamble sampling, sensor network, wireless

10 Receiver-initiated collision avoidance in wireless networks

J. J. Garcia-Luna-Aceves, Asimakis Tzamaloukas
March 2002 Wireless Networks, Volume 8 Issue 2/3
Publisher: Kluwer Academic Publishers
Full text available: pdf(328.56 KB) Additional Information: full citation, abstract, references, cited by, index terms

Bibliometrics: Downloads (6 Weeks): 2, Downloads (12 Months): 51, Citation Count: 3

Many medium-access control (MAC) protocols for wireless networks proposed or implemented to date are based on collision-avoidance handshakes between sender and receiver. In the vast majority of these protocols, including the IEEE 802.11 standard, the ...

Keywords: MAC, Medium Access Control, ad hoc networks, collision avoidance, performance analysis, receiver-initiated, wireless

11 The flooding time synchronization protocol

Miklós Maróti, Branislav Kusy, Gyula Simon, Ákos Lédeczi
November 2004 SenSys '04: Proceedings of the 2nd international conference on Embedded networked sensor systems
Publisher: ACM
Full text available: pdf(178.40 KB) Additional Information: full citation, abstract, references, cited by, index terms

Bibliometrics: Downloads (6 Weeks): 16, Downloads (12 Months): 254, Citation Count: 34

Wireless sensor network applications, similarly to other distributed systems, often require a scalable time synchronization service enabling data consistency and coordination. This paper describes the Flooding Time Synchronization Protocol (FTSP), especially ...

Keywords: clock drift, clock synchronization, multi-hop, sensor networks, time synchronization

12 Performance measurements of motes sensor networks

G. Anastasi, A. Falchi, A. Passarella, M. Conti, E. Gregori
October 2004 MSWiM '04: Proceedings of the 7th ACM international symposium on Modeling, analysis and simulation of wireless and mobile systems
Publisher: ACM
Full text available: pdf(334.52 KB) Additional Information: full citation, abstract, references, cited by, index terms

Bibliometrics: Downloads (6 Weeks): 27, Downloads (12 Months): 208, Citation Count: 2

In this paper we investigate the performance of mica2 and mica2dot Berkeley motes by means of an extensive experimental analysis. This study is aimed at analyzing the main elements that characterize the performance of a sensor network, e.g., power consumption ...

Keywords: mica motes, sensor networks

13 Congestion control and fairness for many-to-one routing in sensor networks

Cheng Tien Ee, Ruzena Bajcsy
November 2004 SenSys '04: Proceedings of the 2nd international conference on Embedded networked sensor systems
Publisher: ACM
Full text available: pdf(289.99 KB) Additional Information: full citation, abstract, references, cited by, index terms

Bibliometrics: Downloads (6 Weeks): 23, Downloads (12 Months): 331, Citation Count: 3

In this paper we propose a distributed and scalable algorithm that eliminates congestion within a sensor network, and that ensures the fair delivery of packets to a central node, or base station. We say that fairness is achieved when equal number of ...

Keywords: congestion control, distributed algorithms, fairness, many-to-one routing, sensor networks

14 Practical lazy scheduling in sensor networks

Ramana Rao Kompella, Alex C. Snoeren
November 2003 SenSys '03: Proceedings of the 1st international conference on Embedded networked sensor systems
Publisher: ACM
Full text available: pdf(284.79 KB) Additional Information: full citation, abstract, references, cited by, index terms

Bibliometrics: Downloads (6 Weeks): 3, Downloads (12 Months): 45, Citation Count: 4

Experience has shown that the power consumption of sensors and other wireless computational devices is often dominated by their communication patterns. We present a practical realization of lazy packet scheduling that attempts to minimize the total transmission ...

Keywords: distributed algorithms, energy conservation, lazy scheduling, sensor networks

15 A trace-based evaluation of adaptive error correction for a wireless local area network

David A. Eckhardt, Peter Steenkiste
December 1999 Mobile Networks and Applications, Volume 4 Issue 4
Publisher: ACM
Full text available: pdf(243.29 KB) Additional Information: full citation, abstract, references, cited by, index terms

Bibliometrics: Downloads (6 Weeks): 3, Downloads (12 Months): 51, Citation Count: 5

Wireless transmissions are highly susceptible to noise and interference. As a result, the error characteristics of a wireless link may vary widely depending on environmental factors such as location of the communicating systems and activity of competing ...

16 A high-throughput path metric for multi-hop wireless routing

Douglas S. J. De Couto, Daniel Aguayo, John Bicket, Robert Morris
September 2003 MobiCom '03: Proceedings of the 9th annual international conference on Mobile computing and networking
Publisher: ACM
Full text available: pdf(265.80 KB) Additional Information: full citation, abstract, references, cited by, index terms

Bibliometrics: Downloads (6 Weeks): 11, Downloads (12 Months): 277, Citation Count: 80

This paper presents the *expected transmission count* metric (ETX), which finds high-throughput paths on multi-hop wireless networks. ETX minimizes the expected total number of packet transmissions (including retransmissions) required to successfully ...

Keywords: 802.11b, DSDV, DSR, ETX, ad hoc networks, multi-hop wireless networks, rooftop networks, route metrics, wireless routing

17 Supporting real-time speech on wireless ad hoc networks: inter-packet redundancy, path diversity, and multiple description coding

Chi-hsien Lin, Hui Dong, Upamanyu Madhow, Allen Gersho

October 2004 WMASH '04: Proceedings of the 2nd ACM international workshop on Wireless mobile applications and services on WLAN hotspots

Publisher: ACM

Full text available: pdf(554.02 KB) Additional Information: full citation, abstract, references, cited by, index terms

Bibliometrics: Downloads (6 Weeks): 6, Downloads (12 Months): 116, Citation Count: 3

We consider the problem of supporting real-time traffic over packetized wireless ad hoc networks. Our specific emphasis is on speech, since this is a critical application in many scenarios such as emergency deployment of ad hoc networks. Standard retransmission-based ...

Keywords: 802.11, ad hoc, path diversity, real-time, speech, wireless

18 Exploiting medium access diversity in rate adaptive wireless LANs

Zhengrong Ji, Yi Yang, Junlan Zhou, Mineo Takai, Rajive Bagrodia

September 2004 MobiCom '04: Proceedings of the 10th annual international conference on Mobile computing and networking

Publisher: ACM

Full text available: pdf(404.09 KB) Additional Information: full citation, abstract, references, cited by, index terms

Bibliometrics: Downloads (6 Weeks): 6, Downloads (12 Months): 122, Citation Count: 7

Recent years have seen the growing popularity of multi-rate wireless network devices (e.g., 802.11a cards) that can exploit variations in channel conditions and improve overall network throughput. Concurrently, rate adaptation schemes have been developed ...

Keywords: medium access, multiuser diversity, scheduling, wireless LAN

19 MiSer: an optimal low-energy transmission strategy for IEEE 802.11a/h

Daji Qiao, Sunghyun Choi, Amit Jain, Kang G. Shin

September 2003 MobiCom '03: Proceedings of the 9th annual international conference on Mobile computing and networking

Publisher: ACM

Full text available: pdf(248.70 KB) Additional Information: full citation, abstract, references, cited by, index terms

Bibliometrics: Downloads (6 Weeks): 8, Downloads (12 Months): 169, Citation Count: 14

Reducing the energy consumption by wireless communication devices is perhaps the most important issue in the widely-deployed and exponentially-growing IEEE 802.11 Wireless LANs (WLANs). TPC (Transmit Power Control) and PHY (physical layer) rate adaptation ...

Keywords: IEEE 802.11a/h, MiSer, PHY rate adaptation, TPC

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